

Applicant: Patrice Flaherty
Application No: 10/630,402
Filing Date: 07/30/2003
Attorney Docket No: 1066

REMARKS

Claims 1-7 and 9-32 are pending in the application.

Claims 12-23 are withdrawn from consideration.

Claims 1-7, 9-11 and 24-32 are rejected.

Claims 1, 7 and 24 are currently amended.

Claim Rejections under 35 U.S.C. 103

Claims 1-7, 9-11 and 24-32 were rejected under 35 U.S.C. 103(a) as being unpatentable over Propp (U.S. 5,919,146) in view of Prager (US 4,257,416).

It is respectfully submitted that Propp in view of Prager fails to render claims 1-7, 9-11 and 24-32 as set forth herein below.

Propp in view of Prager fails to teach subject matter of claims 1-6

It is respectfully submitted that Propp in view of Prager fails to teach or suggest a device comprising “a main tubing segment...an indicator unit and an access port disposed in bidirectional fluid communication with said main tubing segment...wherein said indicator unit has a *fluid-sealed first end disposed in fluid communication with and proximate said main tubing segment, a second end distal to said main tubing segment relative to said first end... at least one air-permeable and liquid-impermeable membrane provided at said second end of said indicator unit*”, as set forth in amended claim 1 and defined by claims 2-6 as dependent therefrom.

In contrast, Propp (Fig. 1) teaches an indicator unit (48 and 56) having a first end (bottom of 56) and a second end (the upper end of 48) opposite the first end. Propp teaches placement of an air-permeable and liquid-impermeable membrane (60) at the end of the indicator unit (second end) which is proximate to the main tubing segment (40) rather than to the end which is distal to the main tubing segment (first end), as set forth in amended claim 1.

Prager fails to teach or suggest an air-permeable and liquid-impermeable membrane at either end of the fluid volumeter (45) of the Prager device.

Propp (Fig. 1) teaches an outlet (68) the purpose of which is "to permit drainage of urine from the receptacle [reference numeral 56]" (col. 3, lines 53 and 54). It is respectfully submitted that Propp teaches away from placement of an air-permeable and liquid-impermeable membrane at an end (68) of the indicator unit (48, 56) which is distal to the main tubing segment (40) relative to the first end (50) of the indicator unit (48, 56), as set forth in amended claim 1, since such placement of the air-permeable and liquid-impermeable membrane would prevent drainage of urine from the indicator unit (48, 56).

It is further respectfully submitted that Propp in view of Prager fails to teach or suggest a device comprising "a main tubing segment...an indicator unit and an access port disposed in bidirectional fluid communication with said main tubing segment...wherein said indicator unit has...*an air flow pathway defined through said indicator unit between [a] first end and [a] second end and a bidirectional liquid flow pathway defined in coinciding relationship with said air flow pathway between said first end and said second end...*", as set forth in amended claim 1.

On page 10, first paragraph of the Office action it was stated, "...Propp discloses and shows structure having two oppositely disposed ends having a lumen defined therebetween, wherein *the lumen may be defined as a path for both air and fluid in both directions because there is no restriction to either flow thereof and therein*" [emphasis added].

It is respectfully submitted, however, that placement of the air-permeable liquid-impermeable membrane (60) at the end of the indicator unit (48, 56) which is proximate rather than distal to the main tubing segment (40) relative to the other end of the indicator unit, as taught by Propp, facilitates flow of liquid in one direction only-from the main tubing segment (40), through the tubing (44) and into the indicator unit (48, 56), respectively. Because air is capable of flowing into the volumeter (48) through the membrane (60), an air lock is formed at the upper end of the volumeter (48) where the tubing (44) joins the volumeter. This air lock at the upper end of the volumeter (48) at the tubing (44) would prevent reverse flow of liquid from the indicator unit (48, 56), through the tubing (44) and into the main tubing segment (40) or into the tubing (33) and sampling unit (10), respectively, even if negative pressure were applied to the sampling unit (10). Therefore, the presence of the membrane (60) at the end of the indicator unit (48, 56) which is proximate to the main tubing segment (40) does provide a restriction to flow of fluid in the indicator unit.

On page 10, second paragraph of the Office action it was stated, "Propp is relied upon to disclose, in part, said indicator unit has a first end...and a second end...wherein an air flow pathway...extends through said fluid volumeter between said first and second ends...and a

bidirectional liquid flow pathway...coincides with the air flow pathway between said first and second ends...".

However, it is respectfully submitted that the liquid flow pathway does not coincide with the air flow pathway in the fluid volumeter since placement of the air-permeable liquid-impervious membrane (60) at the end of the indicator unit (48, 56) which is proximate rather than distal to the main tubing segment (40) relative to the other end of the indicator unit, as taught by Propp, causes flow of air from the volumeter (48) through the membrane (60) as liquid flows into the volumeter from the tubing (44) and displaces the air in the volumeter. Therefore, the liquid flow pathway of the incoming liquid and the air flow pathway of the outgoing air diverge at the proximal end (50) of the volumeter and therefore, do not coincide with each other.

It is further respectfully submitted that Propp in view of Prager teaches away from a device comprising "a main tubing segment...an indicator unit and an access port disposed in bidirectional fluid communication with said main tubing segment...wherein said indicator unit has a *fluid-sealed first end disposed in fluid communication with and proximate said main tubing segment...*", as set forth in amended claim 1 and defined by claims 2-6 as dependent therefrom.

It is respectfully submitted that replacing the air-vented proximal end (50) of the indicator unit (48, 56) in the Propp device with a fluid-sealed end would prevent flow of liquid from the main tubing segment (40) and tubing (44) into the indicator unit (48, 56), respectively, since in that case the liquid in the tubing (44) could not displace the air which is contained in the volumeter (48).

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Therefore, it is respectfully submitted that Propp in view of Prager fails to render amended claim 1, and claims 2-6 as dependent therefrom, obvious under 35 U.S.C. 103(a). Reconsideration and allowance of claims 1-6 is therefore respectfully solicited.

Propp in view of Prager fails to teach subject matter of claims 7 and 9-11

It is respectfully submitted that Propp in view of Prager fails to teach or suggest device comprising “a main tubing segment...a blood volumeter having a fluid-sealed first end disposed in fluid communication with and proximate said main tubing segment and a second end distal to said main tubing segment relative to said first end...at least one air-permeable and liquid-impermeable membrane disposed in fluid communication with said blood volumeter at said second end of said blood volumeter”, as set forth in amended claim 7 and defined by claims 9-11 as dependent therefrom, for the same reason as was set forth herein above with respect to the rejection of claims 1-6.

It is further respectfully submitted that Propp in view of Prager fails to teach or suggest a device comprising “a main tubing segment...a blood volumeter having a fluid-sealed first end disposed in fluid communication with...said main tubing segment...and an access port disposed in fluid communication with said main tubing segment...wherein an air flow pathway is defined through said blood volumeter...and a bidirectional liquid flow pathway coincides with said air flow pathway...”, as set forth in amended claim 7 and defined by claims 9-11 as dependent therefrom, for the same reason as was set forth herein above with respect to the rejection of claims

1-6.

It is further respectfully submitted that Propp in view of Prager teaches away from a device comprising "a main tubing segment...a blood volumeter having a fluid-sealed first end disposed in fluid communication with and proximate said main tubing segment...", as set forth in amended claim 7 and defined by claims 9-11 as dependent therefrom, for the same reason as was set forth herein above with respect to the rejection of claims 1-6.

Therefore, it is respectfully submitted that Propp in view of Prager fails to render amended claims 7 and 9-11 obvious under 35 U.S.C. 103(a). Reconsideration and allowance of amended claims 7 and 9-11 is therefore respectfully solicited.

Propp in view of Prager fails to teach subject matter of claims 24-32

It is respectfully submitted that Propp in view of Prager fails to teach or suggest a device comprising "a main tubing segment...an indicator unit having a fluid-sealed first end disposed in fluid communication with and proximate said main tubing segment, a second end distal to said main tubing segment relative to said first end...a blood volumeter between said first end and said second end of said indicator unit...at least one air-permeable and liquid-impermeable membrane provided at said second end of said blood indicator unit...", as set forth in amended claim 24 and defined by claims 25-32 as dependent therefrom, for the same reason as was set forth herein above with respect to the rejection of claims 1-6.

It is respectfully submitted that Propp in view of Prager fails to teach or suggest a device comprising "a main tubing segment...an indicator unit...disposed in fluid communication

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with...said main tubing segment...an air flow pathway extending through said indicator unit...and a bidirectional liquid flow pathway coinciding with said air flow pathway...", as set forth in amended claim 24 and defined by claims 25-32 as dependent therefrom, for the same reason as was set forth herein above with respect to the rejection of claims 1-6.

It is further respectfully submitted that Propp in view of Prager teaches away from a device comprising "a main tubing segment...an indicator unit having a fluid-sealed first end disposed in fluid communication with and proximate said main tubing segment...", as set forth in amended claim 24 and defined by claims 25-32 as dependent therefrom, for the same reason as was set forth herein above with respect to the rejection of claims 1-6.


Therefore, it is respectfully submitted that Propp in view of Prager fails to render amended claim 24, and claims 25-32 as dependent therefrom, obvious under 35 U.S.C. 103(a). Reconsideration and allowance of claims 25-32 is therefore respectfully solicited.

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Conclusion

Every effort has been made to amend the claims of the application in order to define the claims to the entitled scope. Accordingly, reconsideration and allowance of claims 1-7, 9-11 and 24-32 is respectfully solicited.

Respectfully submitted,


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